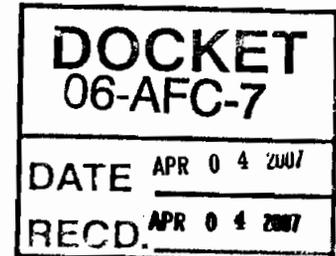




CH2M HILL
2485 Natomas Park Drive
Suite 600
Sacramento, CA 95833
Tel 916.920.0300
Fax 916.920.8463

April 4, 2007

Mr. John Kessler
Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814



**Re: Humboldt Bay Repowering Project (06-AFC-7):
Revisions to the Air Quality Analysis: Baseline Period and Emission Reduction
Credits**

Dear Mr. Kessler:

On behalf of the Pacific Gas and Electric Company, please find attached one original and 12 copies of a document titled *Revisions to the Air Quality Analysis: Baseline Period and Emission Reduction Credits* filed in support of the Application for Certification for the Humboldt Bay Repowering Project (06-AFC-07).

If you have any questions about this matter, please contact me at (916) 286-0278 or Susan Strachan at (530) 220-7038.

Sincerely,

for Douglas M. Davy, Ph.D.
AFC Project Manager

Attachment

cc: G. Lamberg
S. Strachan

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION OF THE
STATE OF CALIFORNIA

APPLICATION FOR CERTIFICATION FOR THE
HUMBOLDT BAY REPOWERING PROJECT
BY PACIFIC GAS AND ELECTRIC COMPANY

Docket No. 06-AFC-7
PROOF OF SERVICE
(Revised 3/27/07)

INSTRUCTIONS: All parties shall 1) send an original signed document plus 12 copies OR 2) mail one original signed copy AND e-mail the document to the web address below, AND 3) all parties shall also send a printed OR electronic copy of the documents that shall include a proof of service declaration to each of the individuals on the proof of service:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 06-AFC-07
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.state.ca.us

APPLICANT

Gregory Lamberg, Project Manager
PG&E Company
Mail Code N12G
P.O. Box 770000
San Francisco, CA 94177-0001
galg@pge.com

APPLICANT'S CONSULTANTS

Douglas M. Davy, Ph.D.
CH2M HILL Project Manager
2485 Natomas Park Drive, Suite 600
Sacramento, CA 95833
ddavy@ch2m.com

Susan Strachan
Environmental Manager
Strachan Consulting
P.O. Box 1049
Davis, CA 95617
strachan@dcn.org

COUNSEL FOR APPLICANT

Scott Galati, Project Attorney
GALATI & BLEK, LLP
555 Capitol Mall, Suite 600
Sacramento, CA 95814
sgalati@gb-llp.com

INTERESTED AGENCIES

Tom Luster
California Coastal Commission
45 Fremont, Suite 2000
San Francisco, CA 94105-2219

Paul Didsayabutra
Ca. Independent System Operator
151 Blue Ravine Road
Folsom, CA 95630
PDidsayabutra@caiso.com

Electricity Oversight Board
770 L Street, Suite 1250
Sacramento, CA 95814
esaltmarsh@eob.ca.gov

INTERVENORS

ENERGY COMMISSION

JEFFREY D. BYRON
Associate Member
jbyron@energy.state.ca.us

JOHN L. GEESMAN
Presiding Member
jgeesman@energy.state.ca.us

Gary Fay
Hearing Officer
gfay@energy.state.ca.us

John Kessler
Project Manager
jkessler@energy.state.ca.us

Lisa DeCarlo
Staff Counsel
ldecarlo@energy.state.ca.us

Mike Monasmith
Public Adviser's Office
pao@energy.state.ca.us

DECLARATION OF SERVICE

I, Jeannette Harris, declare that on April 4, 2007, I deposited the required copies of the attached Revisions to the Air Quality Analysis: Baseline Period and Emission Reduction Credits filed in support of the Application for Certification for the Humboldt Bay Repowering Project (06-AFC-7) in the United States mail at Sacramento, California with first-class postage thereon fully prepaid and addressed to those identified on the Proof of Service list above. I declare under penalty of perjury that the foregoing is true and correct.

OR

Transmission via electronic mail was consistent with the requirements of California Code of Regulations, title 20, sections 1209, 1209.5, and 1210. All electronic copies were sent to all those identified on the Proof of Service list above.

I declare under penalty of perjury that the foregoing is true and correct.


[signature]

HUMBOLDT BAY REPOWERING PROJECT

REVISIONS TO AIR QUALITY ANALYSIS: BASELINE PERIOD AND EMISSION REDUCTION CREDITS

Development of the HBRP includes shutting down the existing generating units at Humboldt Bay Power Plant and replacing them with new generating equipment. Applicable air regulations require that there must be no net increase in emissions from the new project above the levels emitted from the existing generating units. To determine the changes in emissions from the project, the HBRP AFC used a baseline period for the existing plant of the two full calendar years prior to preparation of the AFC, or 2004-2005. When emissions from the new project are compared with emissions from the existing plant for that period, the proposed project will result in large net reductions in NO_x emissions but net increases in ROC and PM₁₀ emissions. The NCUAQMD is a nonattainment area for the state PM₁₀ standard, so offsets are required for PM₁₀ and any precursors. NO_x and ROC are both considered to be precursors to PM₁₀. The applicant prepared an analysis of the air quality in the project area (Appendix 8.1G of the AFC) and proposed using NO_x reductions to offset the ROC and PM₁₀ increases at ratios of 1:1 and 2.54:1, respectively.

The ARB staff reviewed the underlying ambient air quality data used in the interpollutant ratio analysis and revised the NO_x to PM₁₀ ratio to 3.58 to 1. The offset calculation has been revised to incorporate this ratio.

After consultation with the NCUAQMD staff, it was determined that the baseline period used to determine historic annual emissions for the emissions netting analysis could also be updated. District staff relied on the following to make this determination:

- District Regulation 1 Rule 110 6.2.2 states, "*Historic Actual Emissions means actual emissions averaged over the two (2) year period immediately preceding the date of application.*"
- PG&E submitted an application for the Humboldt Bay Repowering Project on September 29, 2006.

Therefore, the District determined that the applicant could use actual emission data from the facility for the two-year period preceding the date of filing, or September 29, 2004, through September 28, 2006.

The applicant is providing revised versions of Tables 8.1A-1 (Humboldt Bay Power Plant Emissions Baseline), 8.1G-1 (Offsets Provided by the Shutdown of Existing Units at Humboldt Bay Power Plant) and 8.1G-2 (Calculation of Emission Reduction Credits) that reflect these updates.

Table 8.1A-1R

HBRP

Baseline Updated March 07 to include Humboldt Bay Power Plant emissions through September 28, 2006

	Humboldt Bay Power Plant Boiler 1: Emissions, tons																			
	2004	NOx	2005	2006	2004	SOx	2005	2006	2004	CO	2005	2006	2004	ROC	2005	2006	2004	PM10	2005	2006
January		49.26	54.55		0.07	0.09			4.81	6.03			1.05	1.31			0.91	1.15		
February		30.53	31.24		0.06	0.07			3.79	4.54			0.82	0.99			0.72	0.86		
March		35.11	42.40		0.06	0.08			4.19	5.47			0.91	1.19			0.80	1.04		
April		5.73	7.71		0.01	0.02			0.92	1.18			0.20	0.26			0.17	0.22		
May		62.20	37.46		0.09	0.07			5.94	4.39			1.29	0.95			1.13	0.83		
June		31.44	52.26		0.06	0.09			4.00	5.52			0.87	1.20			0.76	1.05		
July		39.28	27.97		0.07	0.07			4.84	4.27			1.05	0.93			0.92	0.81		
August		62.02	34.75		0.09	0.07			6.13	4.52			1.33	0.98			1.16	0.86		
Sept 1-28		23.73	26.09		0.05	0.06			3.53	3.80			0.77	0.83			0.67	0.72		
Sept 29-30	1.46	3.21		0.00	0.01			0.21	0.36			0.05	0.08			0.04	0.07			
October	23.34	57.28		0.05	0.09			3.25	6.01			0.71	1.31			0.62	1.14			
November	49.60	53.40		0.07	0.09			4.52	5.58			0.98	1.21			0.86	1.06			
December	48.17	38.31		0.07	0.07			4.57	4.34			0.99	0.94			0.87	0.82			

	Humboldt Bay Power Plant Boiler 2																			
	2004	NOx	2005	2006	2004	SOx	2005	2006	2004	CO	2005	2006	2004	ROC	2005	2006	2004	PM10	2005	2006
January		38.39	51.69		0.07	0.09			4.78	6.19			1.04	1.35			0.91	1.18		
February		27.91	32.73		0.06	0.07			3.86	4.72			0.84	1.03			0.73	0.90		
March		26.37	41.50		0.06	0.09			3.90	5.72			0.85	1.24			0.74	1.09		
April		61.37	59.30		0.10	0.11			6.27	7.24			1.36	1.57			1.19	1.38		
May		9.92	21.47		0.02	0.05			1.56	3.53			0.34	0.77			0.30	0.67		
June		14.23	6.72		0.04	0.02			2.57	0.99			0.56	0.21			0.49	0.19		
July		24.23	28.33		0.06	0.06			3.70	4.22			0.80	0.92			0.70	0.80		
August		49.18	49.57		0.09	8.38			6.08	5.61			1.32	1.21			1.16	1.62		
Sept 1-28		22.46	48.65		0.05	46.01			3.64	4.45			0.79	0.90			0.69	4.03		
Sept 29-30	1.45	2.45		0.00	0.01			0.22	0.36			0.05	0.08			0.04	0.07			
October	23.82	46.74		0.05	0.09			3.41	6.11			0.74	1.33			0.65	1.16			
November	41.99	47.32		0.07	0.09			4.54	5.86			0.99	1.27			0.86	1.11			
December	39.71	48.19		0.07	0.09			4.59	5.97			1.00	1.30			0.87	1.13			

Table 8.1A-1R (cont'd)

	Humboldt Bay Power Plant MEPP 2														
	2004	NOx 2005	2006	2004	SOx 2005	2006	2004	CO 2005	2006	2004	ROC 2005	2006	2004	PM10 2005	2006
January		1.18	2.08		0.06	0.02		0.14	0.19		0.04	0.05		0.18	0.24
February		0.05	0.05		0.00	0.00		0.01	0.00		0.00	0.00		0.01	0.01
March		0.46	0.26		0.02	0.00		0.05	0.02		0.01	0.01		0.07	0.03
April		5.18	10.93		0.26	0.12		0.62	0.97		0.16	0.25		0.78	1.24
May		2.77	0.34		0.14	0.00		0.33	0.03		0.09	0.01		0.42	0.04
June		1.06	0.55		0.05	0.01		0.13	0.05		0.03	0.01		0.16	0.06
July		0.53	0.05		0.03	0.00		0.06	0.00		0.02	0.00		0.08	0.01
August		1.12	5.33		0.06	0.06		0.13	0.47		0.03	0.12		0.17	0.60
Sept 1-28		0.05	2.01		0.00	0.02		0.01	0.18		0.00	0.05		0.01	0.23
Sept 29-30	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
October	0.30	0.21		0.02	0.01		0.04	0.02		0.01	0.01		0.05	0.03	
November	0.81	0.19		0.06	0.01		0.10	0.02		0.02	0.01		0.12	0.03	
December	1.42	1.62		0.11	0.08		0.17	0.19		0.04	0.05		0.21	0.24	

	Humboldt Bay Power Plant MEPP 3														
	2004	NOx 2005	2006	2004	SOx 2005	2006	2004	CO 2005	2006	2004	ROC 2005	2006	2004	PM10 2005	2006
January		0.02	2.00		0.00	0.02		0.00	0.19		0.00	0.05		0.00	0.24
February		0.12	0.06		0.00	0.00		0.01	0.01		0.00	0.00		0.01	0.01
March		0.12	0.47		0.00	0.01		0.01	0.04		0.00	0.01		0.01	0.06
April		5.42	6.71		0.21	0.08		0.51	0.63		0.13	0.16		0.64	0.80
May		5.19	0.07		0.20	0.00		0.48	0.01		0.13	0.00		0.62	0.01
June		0.82	0.29		0.03	0.00		0.08	0.03		0.02	0.01		0.10	0.03
July		0.23	0.67		0.01	0.01		0.02	0.06		0.01	0.02		0.03	0.08
August		2.06	2.89		0.08	0.03		0.19	0.27		0.05	0.07		0.24	0.34
Sept 1-28		0.07	0.89		0.00	0.01		0.01	0.083		0.00	0.02		0.01	0.11
Sept 29-30	0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00		0.00	0.00	
October	0.00	1.72		0.00	0.07		0.00	0.16		0.00	0.04		0.00	0.20	
November	0.04	5.47		0.00	0.21		0.00	0.51		0.00	0.13		0.01	0.65	
December	0.00	5.52		0.00	0.22		0.00	0.52		0.00	0.13		0.00	0.66	

Table 8.1A-1R (cont'd)

Quarterly Emissions, tons

	HB 1					HB 2					MEPP 2					MEPP 3				
	NOx	SO2	CO	ROC	PM-10	NOx	SO2	CO	ROC	PM-10	NOx	SO2	CO	ROC	PM-10	NOx	SO2	CO	ROC	PM-10
Q3 2004 (1)	1.46	0.00	0.21	0.05	0.04	1.45	0.00	0.22	0.05	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Q4 2004	121.12	0.19	12.35	2.69	2.35	105.53	0.19	12.54	2.73	2.38	2.53	0.19	0.30	0.08	0.38	0.04	0.00	0.00	0.00	0.01
Q1 2005	114.90	0.20	12.79	2.78	2.43	92.67	0.19	12.54	2.73	2.38	1.68	0.08	0.20	0.05	0.25	0.26	0.01	0.02	0.01	0.03
Q2 2005	99.37	0.17	10.86	2.36	2.06	85.52	0.16	10.40	2.26	1.98	9.01	0.45	1.07	0.28	1.36	11.42	0.45	1.07	0.28	1.36
Q3 2005	128.23	0.23	14.85	3.23	2.82	98.32	0.21	13.78	3.00	2.62	1.70	0.09	0.20	0.05	0.26	2.35	0.09	0.22	0.06	0.28
Q4 2005	148.99	0.24	15.93	3.46	3.03	142.25	0.27	17.94	3.90	3.41	2.02	0.10	0.24	0.06	0.31	12.71	0.50	1.19	0.31	1.51
Q1 2006	128.18	0.24	16.04	3.49	3.05	125.92	0.25	16.63	3.62	3.16	2.39	0.03	0.21	0.05	0.27	2.53	0.03	0.24	0.06	0.30
Q2 2006	97.43	0.17	11.08	2.41	2.11	87.49	0.18	11.76	2.56	2.23	11.82	0.13	1.05	0.27	1.34	7.07	0.08	0.66	0.17	0.84
Q3 2006 (2)	88.82	0.19	12.59	2.74	2.39	126.55	54.46	14.27	3.02	6.45	7.38	0.08	0.66	0.17	0.83	4.44	0.05	0.42	0.11	0.53

Notes: 1. Sept 29-30, 2004
2. Sept 1-28, 2006

Unit-specific Quarterly Averages, September 29, 2004 -- September 28, 2006

	HB 1					HB 2					MEPP 2					MEPP 3				
	NOx	SO2	CO	ROC	PM-10	NOx	SO2	CO	ROC	PM-10	NOx	SO2	CO	ROC	PM-10	NOx	SO2	CO	ROC	PM-10
Q1	121.54	0.22	14.42	3.14	2.74	109.30	0.22	14.59	3.17	2.77	2.04	0.06	0.21	0.05	0.26	1.39	0.02	0.13	0.03	0.17
Q2	98.40	0.17	10.97	2.39	2.08	86.51	0.17	11.08	2.41	2.10	10.41	0.29	1.06	0.27	1.35	9.25	0.27	0.86	0.22	1.10
Q3	109.25	0.21	13.83	3.01	2.63	113.16	27.34	14.13	3.03	4.56	4.54	0.08	0.43	0.11	0.55	3.40	0.07	0.32	0.08	0.40
Q4	135.05	0.22	14.14	3.08	2.69	123.89	0.23	15.24	3.31	2.90	2.27	0.15	0.27	0.07	0.34	6.38	0.25	0.60	0.15	0.76

Facilitywide Quarterly Averages, September 29, 2004 -- September 28, 2006

	NOx	SO2	CO	ROC	PM-10
Q1	234.27	0.52	29.34	6.40	5.94
Q2	204.56	0.90	23.97	5.29	6.64
Q3	230.35	27.70	28.71	6.23	8.13
Q4	267.59	0.85	30.25	6.61	6.68
Total	936.77	29.97	112.27	24.54	27.39

TABLE 8.1G-1R
 Offsets Provided by the Shutdown of Existing Units at Humboldt Bay Power Plant
 Revised March 2007

Pollutant	Q1, tons	Q2, tons	Q3, tons	Q4, tons	Annual, tons
<i>NO_x</i>					
Emissions Increase, New Units	42.7	43.1	44.2	44.2	174.3
Actual Historical Reduction, Shutdown of Existing Units	234.3	204.6	230.4	267.6	936.8
Net Increase (Reduction)	(191.6)	(161.5)	(186.2)	(223.4)	(762.5)
<i>RO_x</i>					
Emissions Increase, New Units	46.6	47.1	47.6	47.6	188.9
Actual Historical Reduction, Shutdown of Existing Units	6.4	5.3	6.2	6.6	24.5
Net Increase (Reduction)	40.2	41.8	41.4	41.0	164.4
<i>SO_x</i>					
Emissions Increase, New Units	3.2	3.3	3.3	3.3	4.4
Actual Historical Reduction, Shutdown of Existing Units	0.5	0.9	27.7	0.8	30.0
Net Increase (Reduction)	2.7	2.4	(24.4)	2.5	(25.6)
<i>PM₁₀</i>					
Emissions Increase, New Units	39.6	40.0	40.5	40.5	160.7
Actual Historical Reduction, Shutdown of Existing Units	5.9	6.6	8.1	6.7	27.4
Net Increase (Reduction)	33.7	33.4	32.4	33.8	133.3

Table 8.1G-2R

HBRP

Calculation of Emission Reduction Credits

Rev March 07 to reflect 10/04 -- 9/06 baseline and higher NOx:PM10 ratio

	Q1 (tons)	Q2 (tons)	Q3 (tons)	Q4 (tons)	Annual, tons	Exclusion, tons
NOx						
NOx	90	91	92	92	365	25
Project Emissions	42.7	43.1	44.2	44.2	174.3	
Project Emissions Subject to Offset	36.8	37.2	37.6	37.6	149.3	
Onsite Reductions (Note 1)	234.3	204.6	230.4	267.6	936.8	
Offsite NOx ERCs (Note 2)	0.93	0.89	0.90	0.89	3.6	
Surplus NOx ERCs	198.4	168.2	193.6	230.8	791.1	
NOx ERCs for ROC	-33.6	-35.2	-34.7	-34.3	-137.8	
Net Surplus NOx ERCs	164.8	133.1	158.9	196.5	653.3	
NOx ERCs for PM10	-92.6	-91.7	-87.6	-92.9	-364.9	
Net Surplus NOx ERCs	72.1	41.3	71.3	103.6	288.4	
ROC						
ROC						25
Project Emissions	46.6	47.1	47.6	47.6	188.9	
Project Emissions Subject to Offset	40.4	40.9	41.3	41.3	163.9	
Onsite Reductions (Note 1)	6.4	5.3	6.2	6.6	24.5	
Offsite ROC ERCs (Note 2)	0.41	0.39	0.39	0.39	1.6	
ROC Deficit	-33.6	-35.2	-34.7	-34.3	-137.8	
NOx for ROC at 1:1 (Note 3)	33.6	35.2	34.7	34.3	137.8	
Net ROC Deficit	0	0	0	0	0.0	
SOx						
SOx						25
Project Emissions	3.2	3.3	3.3	3.3	4.4	
Project Emissions Subject to Offset	0.0	0.0	0.0	0.0	0.0	
Onsite Reductions (Note 1)	0.5	0.9	27.7	0.8	30.0	
Net Surplus SOx ERCs	0.5	0.9	27.7	0.8	30.0	
PM10						
PM10						25
Project Emissions	39.6	40.0	40.5	40.5	160.7	
Project Emissions Subject to Offset	33.4	33.8	34.2	34.2	135.7	
Onsite Reductions (Note 1)	5.9	6.6	8.1	6.7	27.4	
Offsite PM10 ERCs (Note 2)	1.6	1.6	1.6	1.6	6.3	
PM10 Deficit	-25.9	-25.6	-24.5	-25.9	-101.9	
Surplus NOx ERCs Used for PM10 (Note 4)	25.9	25.6	24.5	25.9	101.9	
Net PM10 ERC Deficit	0.0	0.0	0.0	0.0	0.0	

Notes:

1. Distance ratio of 1:1 applies to onsite reductions from shutdown of Humboldt Bay Power Plant.
2. Offsite ERCs purchased from Eel River Sawmills March 26, 2007; adjusted for distance ratio of 1.5:1.
3. See Attachment 8.1G-1.
4. NOx:PM10 offset ratio of 3.58 to 1 provided by ARB March 22, 2007.